

IN THE CLAIMS

1. (currently amended) A receiving apparatus, comprising:

demodulation means for demodulating a reception signal to a signal on a real axis and a signal on an imaginary axis;

carrier-to-noise (C/N) ratio calculation means for calculating a C/N ratio with amplitudes in an amplitude direction of signal points of the reception signal demodulated by said demodulation means and a C/N ratio with amplitudes in a phase direction of the signal points of the reception signal demodulated by said demodulation means;

phase noise detection means for detecting phase noise based on the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction;

indication means for indicating the C/N ratios calculated by said C/N ratio calculation means; and

a display unit to display the phase noise detected by the phase noise detection means based on the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction as a numeric value; and

an alarm indicator which provides an indication to a user when the phase noise detected based on the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction is equal to or larger than a predetermine value.

2. (previously presented) The receiving apparatus as set forth in claim 1,

wherein said demodulation means comprises phase compensation means for compensating a phase with an external compensation signal, and

wherein when the phase noise takes place, said phase compensation means compensates the phase.

3. (canceled)

4. (canceled)

5. (currently amended) A carrier-to-noise (C/N) ration indication method for a receiving apparatus, the method comprising the steps of:

demodulating a reception signal to a signal on a real axis and a signal on an imaginary axis by use of demodulation means;

calculating a C/N ratio with amplitudes in an amplitude direction of signal points of the reception signal demodulated by said demodulation means and a C/N ratio with amplitudes in a phase direction of the signal points of the reception signal demodulated by said demodulation means;

determining whether phase noise takes place based on the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction;

indicating the C/N ratios calculated by the calculating step; ~~and~~

displaying the phase noise determined by the determining step based on the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction on a display unit as a numeric value; and

providing an indication to a user by use of an alarm indicator when the phase noise determined based on the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction is equal to or larger than a predetermine value.

6. (canceled)

7. (canceled)